

IN THE CLAIMS

Please amend the claims as follows:

Claim 1-6 (Cancelled).

Claim 7 (Original): A characteristic evaluation method for insulated gate type transistors, comprising:

- a) preparing at least two insulated gate type transistors including first and second insulated gate type transistors that differ from each other only in mask channel width;
- b) extracting a threshold voltage of said first transistor that has a mask channel width larger than that of said second transistor, estimating a threshold voltage of said second transistor, and employing a value of the estimated threshold voltage as a first estimated value;
- c) when a difference between a gate voltage of said first transistor and said extracted threshold voltage of said first transistor is defined as a first gate overdrive, a difference between a gate voltage of said second transistors and said first estimated value is defined as a second gate overdrive, and an X-Y plane is assumed whose X-axis is said mask channel width and Y-axis is source-drain conductance, (i) extracting a virtual point at which a change in Y coordinate value is estimated to be approximately zero when said first and second gate overdrives are finely changed, from a first characteristic curve exhibiting a relationship between said mask channel widths of said first and second transistors and said source-drain conductance, and employing a value of an X-coordinate at said virtual point as a second estimated value or (ii) employing a value of an X intercept of said first characteristic curve as said second estimated value;
- d) repeating said step c) while varying said first estimated value;
- c) after said steps c) and d), (i) finding, based on said first and second estimated values, an optimum first estimated value with which a second characteristic curve exhibiting

a relationship between said second gate overdrive and said second estimated value in an X-Y plane whose X-axis is said second gate or overdrive and Y-axis is a value related to said second estimated value has a predetermined shape within a predetermined range of said second gate overdrive, and (ii) determining a true threshold voltage of said second transistor based on said optimum first estimated value; and

f) determining a difference between said mask channel width and an effective channel width based on said true threshold voltage.

Claim 8 (Original): The method of claim 7, wherein  
in said step c), said value of the X intercept of said first characteristic curve is defined as a third estimated value, and  
in said step e), a value that is obtained by reducing said second estimated value from twice said third estimated value is employed as said value related to said second estimated value.

Claim 9 (Original): The method of claim 8, wherein in said step e) said first estimated value with which a value that is obtained by reducing said second estimated value from twice said third estimated value is best converged on a fixed value in said predetermined range is employed as said optimum first estimated value.

Claim 10 (Original): The method of claim 8, wherein in said step f), a difference between said mask channel width and an effective channel width is determined from a value that is obtained by reducing said second estimated value from twice said third estimated value when said gate overdrive is in a vicinity of 0 V.

Atty. Docket No. 244907US2DIV  
Inventor: Kenji YAMAGUCHI  
Preliminary Amendment filed with New Application

Claims 11-19 (Cancelled)